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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,175	05/23/2001	Matthias Kehder	01-203	9628

7590 11/13/2003

Barry L. Kelmachter  
BACHMAN & LaPOINTE, P.C.  
900 Chapel Street, Suite 1201  
New Haven, CT 06510-2802

EXAMINER
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HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 11/13/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/863,175

Applicant(s)

KEHDER ET AL.

Examiner

Joseph P. Hirl

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claims 1-48 are pending in this application.
2. The claims and only the claims form the metes and bounds of the invention.  
"Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:  

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 1-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims recite the intention of developing a predictive model. Such a predictive model is based on the premise of at least one independent variable that identifies a single dependent variable. The detailed description of the preferred embodiments, (specification, page 9 through page 34 including the related drawings) identifies coding and Fig. 6 illustrates a system configuration but the details involving how one steps from the chromosomes to a fully descriptive model are not identified in an integrated manner and such step is non trivial. Specifically, if the model is to be of the form  $y = \tan^{-1}(k_1x_1^{2.475}) + k_2x_2^{34.475} + k_3x_3^{247.5} + \text{abs}(k_4x_4^{3.656}) + k_4$  where  $k_i$  are constants,  $x_i$  are independent variables and  $y$  is the dependent variable, the full process identification which includes all elements of functionality and integration has not been disclosed such that one of ordinary skill in the art could replicate the invention without undue experimentation.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 34 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Michalewicz et al (ACM 0001-0782, referred to as Michalewicz).

**Claims 1, 34**

Michalewicz anticipates (a) providing a dataset containing a plurality of observations each containing a value for said dependent variable and values for said at least one independent variable (**Michalewicz**, p 2, l 30, 31); (b) creating from said dataset of an initial generation of chromosomes each comprising a predictive model (**Michalewicz**, p 2, l 31); (c) determining a quantitative fitness measure for each chromosome in said initial generation (**Michalewicz**, p2, l 32); and (d) creating a next generation of chromosomes by selecting a number of chromosomes from said initial generation, crossing said selected chromosomes by at least one of a cloning and a crossover technique, and mutating said chromosomes (**Michalewicz**, p2, l 33).

**Claim 2**

Michalewicz anticipates (e) determining new fitness measures for said chromosomes in said next generation, and (f) repeating said selecting, crossing and mutating steps to create a successive generation of chromosomes (**Michalewicz**, p2, l 16-20).

**Claim 3**

Michalewicz anticipates continuously repeating steps (e) and (f) for said successive generation of chromosomes to create another successive generation of chromosomes (**Michalewicz**, p2, l 16-20).

**Claim 4**

Michalewicz anticipates said initial generation chromosome creating step is performed using a random method (**Michalewicz**, p7, l 29-31).

**Claim 5**

Michalewicz anticipates initial generation chromosome creating step is performed using a distributed method (**Michalewicz**, p7, l 29-31; Examiner's Note (EN): para 2 applies; to one of ordinary skill in the art, a distributed process is random).

**Claim 41**

Michalewicz anticipates a chromosome for predicting a model comprising a plurality of observed variable segments (**Michalewicz**, p1, l 30), a plurality of interaction segments (**Michalewicz**, p1, l 31) and an intercept gene (**Michalewicz**, p2, l 26-27; EN: para 2 applies; the intercept gene and a mutation gene are synonymous).

***Conclusion***

6. The prior art of record and not relied upon is considered pertinent to applicant's disclosure.

Koza et al, USP 6,058,385

Koza et al, USP 5,742,738

7. Claims 1-48 are rejected.

**Correspondence Information**

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anil Khatri can be reached at (703) 305-0282.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,  
Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).

Hand-delivered responses should be brought to:

Receptionist, Crystal Park II  
2121 Crystal Drive,  
Arlington, Virginia.

Joseph P. Hirl



November 3, 2003



**ANIL KHATRI**  
SUPERVISORY PATENT EXAMINER